

# Health Insurance Advisory Council

## BCBSRI Reserve Needs and Target

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# Basic Questions to Address

Why does BCBSRI need strong reserves?

What target range is appropriate for BCBSRI?

What is the basis for this target range?

What evidence supports the reasonableness of this reserve target range?

Concerns with Lewin conclusions for BCBSRI.



# Highlights

**Overarching Goal:** BCBSRI to be a financially secure, viable, independent, non-profit BCBS Plan

**Reserve Target:**

- Near-term goal – 22% of insured premium
- Longer-term goal – 25-35% of premium

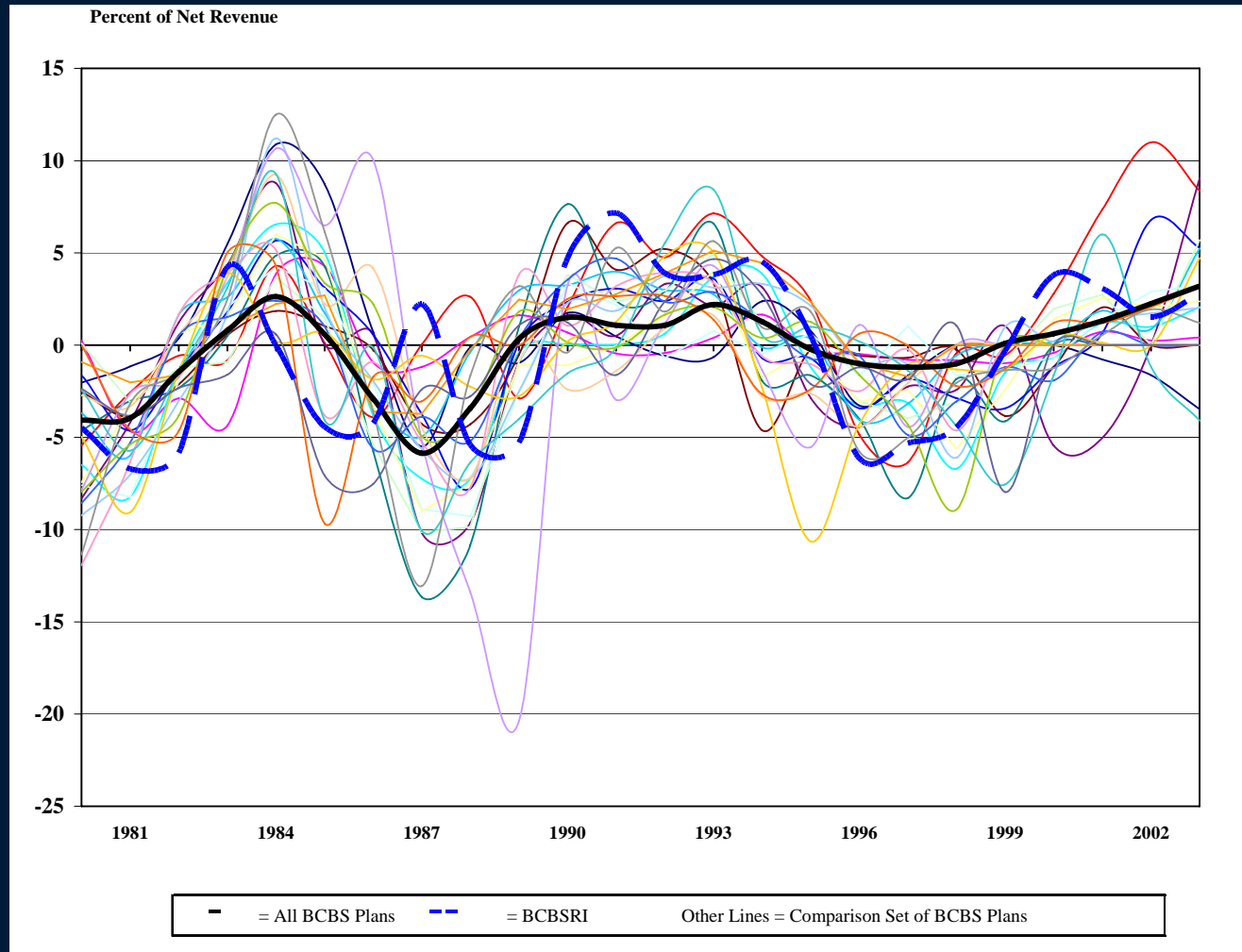


# I. Why Strong Reserves?

- A. Historical Loss Periods/Cycles
- B. Risks and Contingencies Faced
- C. Purpose of Reserves



# Historical Operating Gain/(Loss) for Selected BCBS Plans



# B. Risks and Contingencies

## 1. Major Categories of Risk

- Rating adequacy and fluctuation
  - Trend miss (volatility)
  - Random experience fluctuations
  - Other rating factors and data accuracy
  - Exposure changes and adverse selection
  - Regulatory and competitive impacts



## B. Risks and Contingencies *(cont'd)*

### 1. Major Categories of Risk *(cont'd)*

- Rating adequacy and fluctuation
- Claim liabilities and other estimates
- Interest rates and portfolio values
- Overhead expense recovery risk
- Other business risks (including AFAs)
- Catastrophic events





## B. Risks and Contingencies *(cont'd)*

### 2. Special Circumstances Faced by BCBSRI

- Concentration of risk geographically
- AFA capital needs and risks
- Structural limitations
  - Small Plan
    - Risk spreading capacity
    - Overhead recovery base
  - Non-profit
    - No parent corporation resources
    - No access to external equity capital markets





## B. Risks and Contingencies *(cont'd)*

### 2. Special Circumstances Faced by BCBSRI *(cont'd)*

- State legislation and regulation
  - Market segment presence and insurer of last resort
  - Premium rates
  - Social mission issues



## C. Purpose of Reserves

### 1. Sources of Risk Protection for Subscribers and Ability to Meet Obligations

- Accumulated reserves
- Reserve contribution factors in rates

### 2. Development and Growth

- Infrastructure and operations
- Product and business development
- Growth capacity (trends and enrollment)



# II. What Target Reserve Range?

## Ongoing actuarial evaluations

- Since 2000
- Multiple methods used for quantifying loss periods and risks

## Conclusion as to appropriate reserve target:

25 - 35% of insured premium, or  
750 - 1,100% of RBC-ACL

## Target range recognizes the often overlooked risks and need for capital associated with:

- AFA business (self-funded)
- Catastrophic events
- Ongoing investment in infrastructure



# III. Basis for 25-35% Target?

A. Objectives and Criteria

B. Provision for Risks and Uncertainties

C. Development of Reserve Target



## A. Objectives and Criteria

1. Withstand adverse loss periods
2. Remain above BCBSA thresholds

Early Warning Monitoring – <i>High Likelihood</i> (375% of RBC-ACL)
Loss of Trademark – <i>Virtual Certainty</i> (200% of RBC-ACL)

3. Adequate provision for infrastructure development and business growth



# B. Provision for Risks and Uncertainty

## 1. Multiple Quantification Approaches

- Loss Periods experienced by BCBSRI
- Loss Periods observed for other BCBS Plans
- Evaluation of risks and contingencies facing BCBSRI

## 2. Relative Strengths and Weaknesses of the Various Quantification Approaches

- Provision for risks vs. prediction
- Historical data vs. forward-looking actuarial assumptions
- Reconciliation of multiple quantification approaches is the most prudent course



## B. Provision for Risks and Uncertainty

### 3. Limitations/issues with Using Reported Data for Other BCBS Plans

- Selection of a comparison set of BCBS Plans
- Varying Plan circumstances and histories
  - Markets and business environments
  - Regulatory environments
  - Mix of business in force
  - Corporate and reporting structures (including subsidiaries)
  - Windfall events
  - Assets and investment policy
- Inconsistencies in historical data
- Statutory reporting basis variations and changes
- Unique Plan-specific factors affecting statutory surplus





## B. Provision for Risks and Uncertainty

### 4. BCBSRI Operating Loss Experience

Adverse Period	Cumulative Loss Percentage	
	Reported Premium Basis	Insured Premium Basis
1980-82	(18)%	(18)%
1985-89	(17)	(20)
1996-98	(16)	(20)

### 5. Comparison Set of BCBS Plans\*

Percentile of Adverse Periods	Cumulative Loss Percentage	
	Reported Premium Basis	Insured Premium Basis (Estimated)
90 <sup>th</sup>	(21)%	(23) - (25)%
80 <sup>th</sup>	(17)	(18) - (21)

\* Based on consolidated operating results for 24 BCBS Plans (the smaller Plans for whom data was available). Reflects 79 adverse cycles during the period 1980-2004.



# B. Provision for Risks and Uncertainty

## 6. Actuarial Risk Evaluation

### a. Risk and Contingency Categories

- Rating fluctuation (including trend miss)
- Claim liabilities and other estimates
- Interest rates and portfolio values
- Overhead expense recovery risk
- Other business risks (including AFAs)
- Catastrophic events

### b. Risk Distributions, by Category

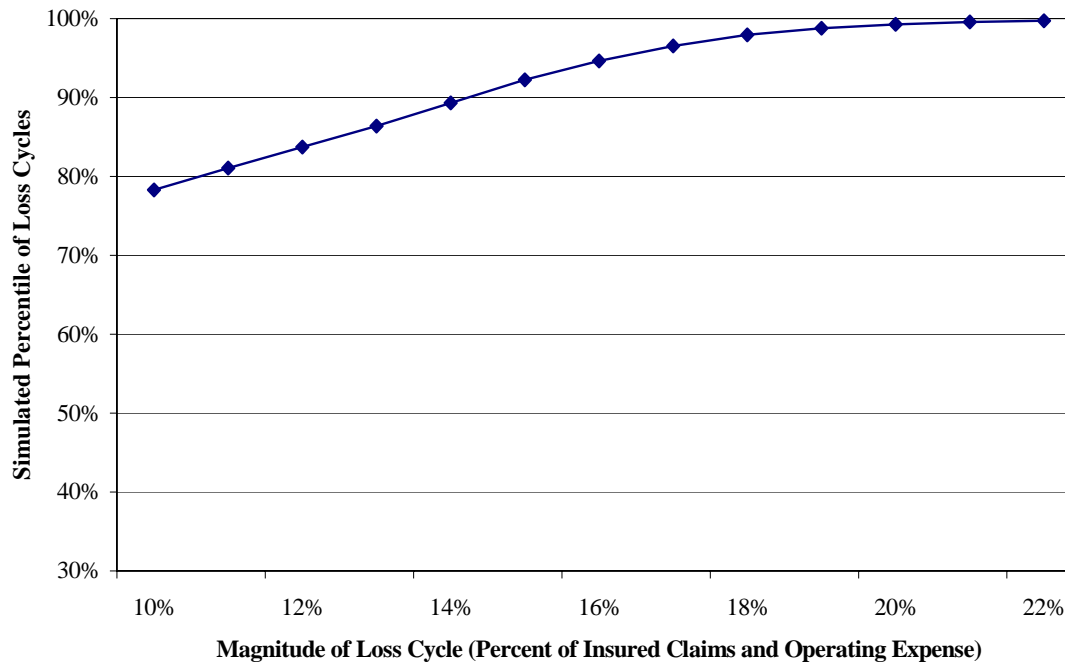
- Independent risk categories
- Dependencies

### c. Provision for Unanticipated Infrastructure Development Needs



# B. Provision for Risks and Uncertainty

## d. Monte Carlo Simulation of Loss Cycles for BCBSRI\*



Percentile of Operating Loss Cycles	Cumulative Loss
98th	18%
95th	16%
90th	14%

\*Analysis undertaken by Milliman in 2004.



# C. Development of Target

## 1. Provision for Multi-Year Loss Periods

Source/Basis	Cumulative Operating Loss (% Premium)
BCBSRI Experience	18 - 20%
Comparison BCBS Plans	17 - 21
Monte Carlo Simulation of Risks and Contingencies	14 - 18



# C. Development of Target *(cont'd)*

## 2. Pro-Forma Projection of Results

- Forecast model for BCBSRI
- Multi-year loss periods
- Trends and other projection factors
- Investment and other income
- Statutory balance sheet items

## 3. Stress-Test Loss Periods in Projection Model to Establish Required Reserve Target Level

- Withstand multi-year loss period
- Recognize directly financial items affecting net income and reserves
- Remain above RBC threshold floors



## C. Development of Target *(cont'd)*

### 4. Reserve Target Results

Operating Loss Cycle	Reserve Level Needed (% premium)	
	Early Warning Monitoring Floor	Loss of Trademark Floor
14%	30 – 32½%	
16	32½ – 35	25 – 27½%
18	35 – 40	27½ – 32½
22		32½ – 37½

### 5. Conclusion: 25-35% of Premium



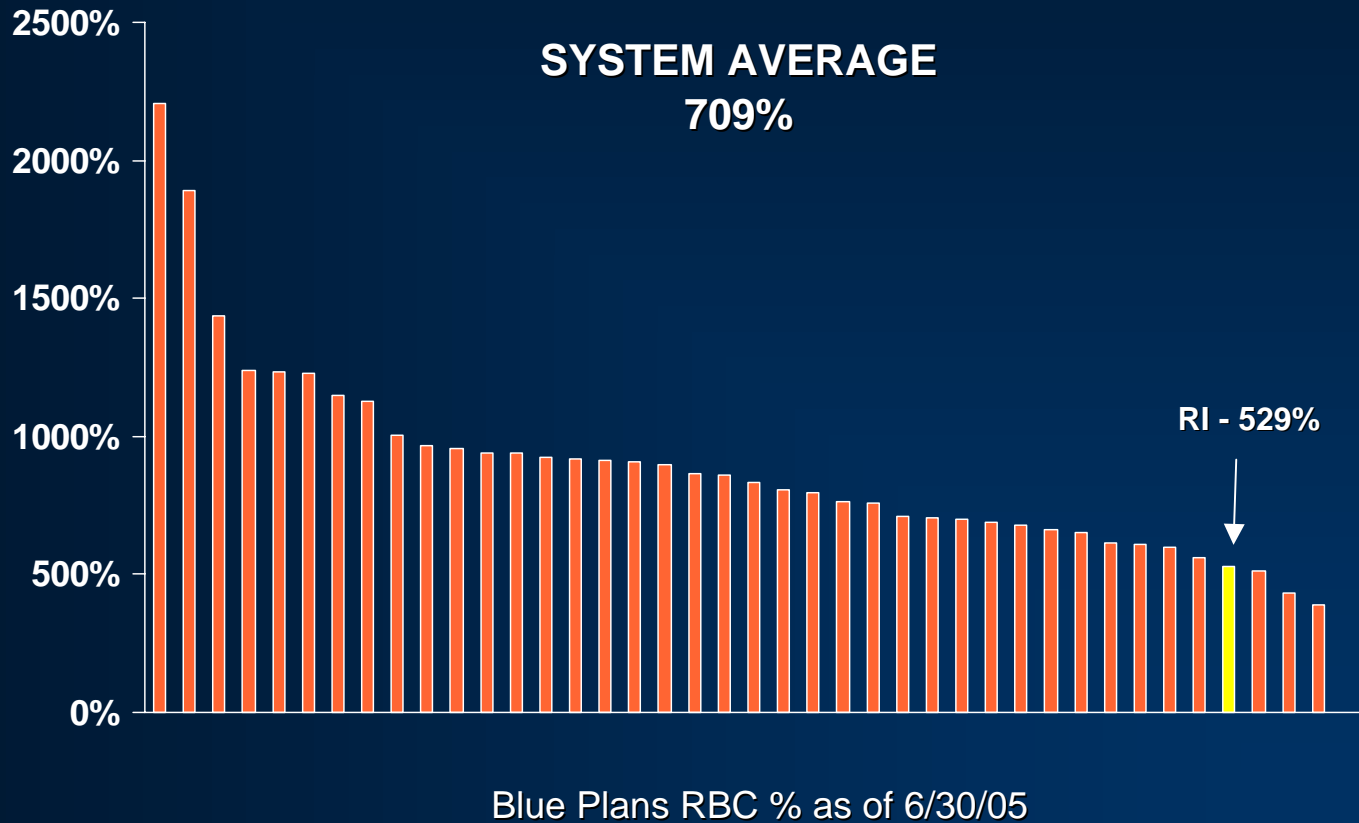
# IV. Reasonableness of Results

- A. Comparison of BCBSRI Reserve Ratio to Other BCBS Plans
- B. Test of Adverse Scenarios



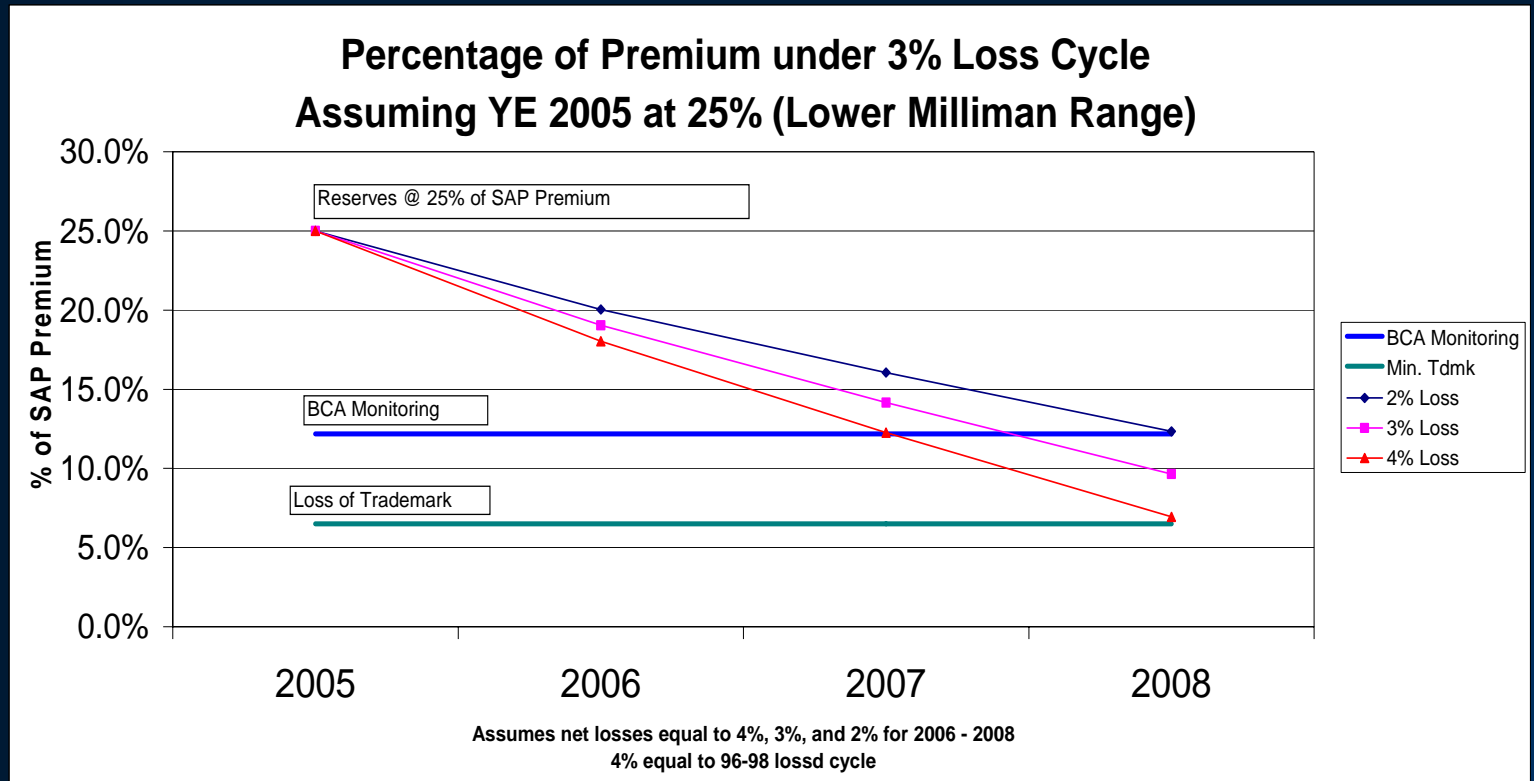


# A. Comparison of BCBSRI Reserve Ratio to Other BCBS Plans



Source: BCBSA, as provided by BCBSRI.

## B. Test of Adverse Scenarios



# V. Concerns with Lewin Results

A. Limitations in Lewin Approach

B. Lower End of the Range

C. Application of Results to BCBSRI

D. Test of Adverse Scenarios



# A. Limitations in Lewin Approach

1. Sole Reliance on a Single Approach to Quantifying Risk for BCBSRI
2. Static, Aggregated Nature of the Approach
  - No forward-looking projection aspect
  - Trend impacts not properly recognized
  - Premise that year-year results are independent
    - Presence of multi-year downturns in the industry
    - Analysis assumes results are independent year-year
  - BCBSRI-specific financial characteristics and outlook not incorporated
  - Same results apply to every one of the 15 BCBS Plans in the analysis



## B. Lower End of the Range

### 1. Target Range Developed in Lewin Model

Threshold	% of Premium, by Number of Survival Years Considered				
	2	3	4	5	6
Early Warning Monitoring	26%	29%	31%	33%	34%
Loss of Trademark	22%	26%	28%	31%	33%

### 2. Number of Years in Downturn (Lewin data)

Number of Plans (14 total*)	5	4	5
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\* Excludes one Plan with incomplete data



## C. Application of Results to BCBSRI

### 1. Target Range Developed in Lewin Model

Threshold	% of Premium, by Number of Survival Years Considered				
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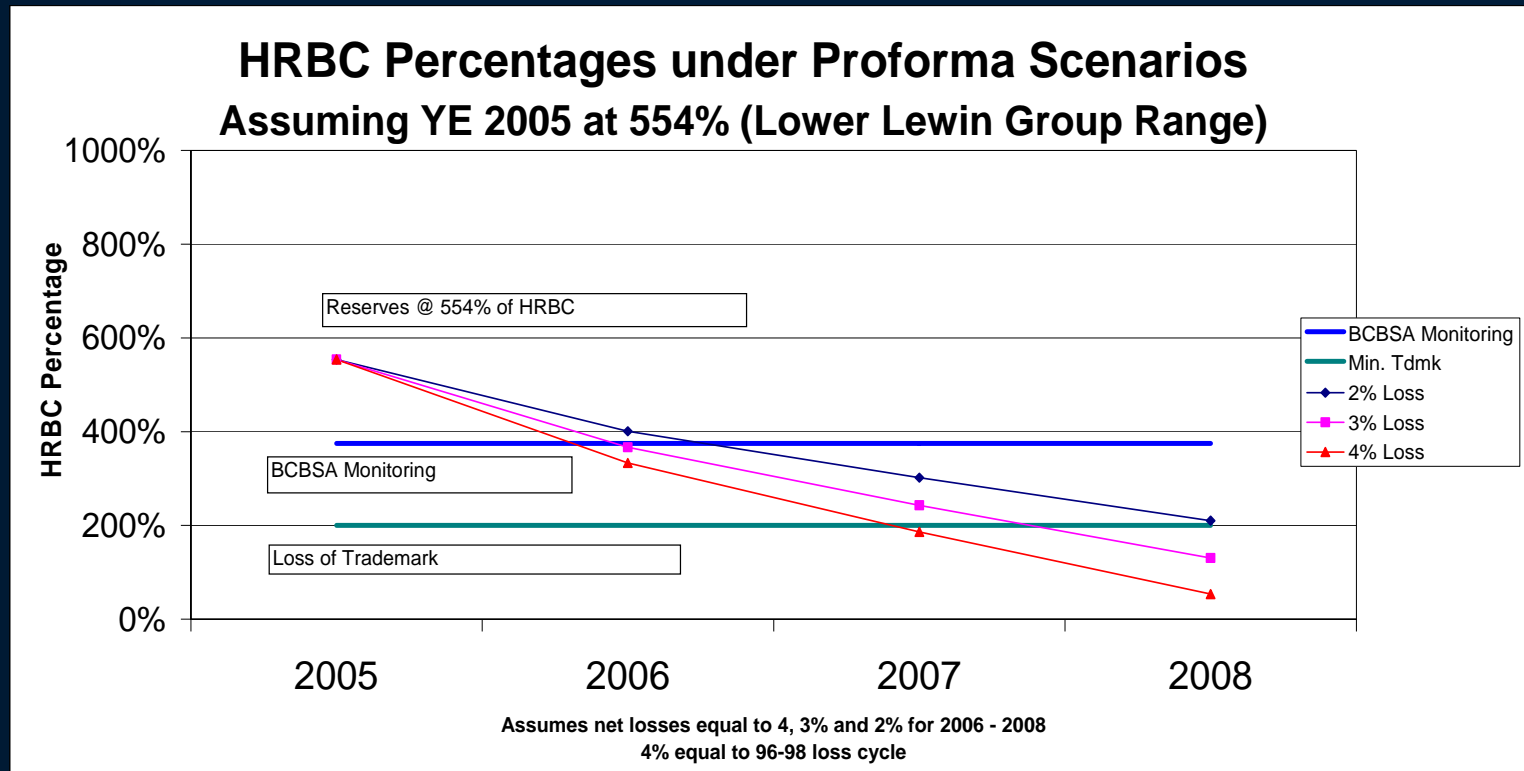
### 2. Range Presented for BCBSRI

554 – 853%	RBC-ACL
2.2 – 3.3	Months of revenue
18 – 28%	Revenue (% of annual)

Significant disconnect from the analysis



# D. Test of Adverse Scenarios



Source: Provided by BCBSRI





# Highlights

**Overarching Goal:** BCBSRI to be a financially secure, viable, independent, non-profit BCBS Plan

**Reserve Target:**

- Near-term goal – 22% of insured premium
- Longer-term goal – 25-35% of premium

**Justification:**

- Sound actuarial development
- Monitored regularly
- Reasonable, compared to historical & industry levels

